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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/612,949

07/07/2003

Hidenori Kato

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7590

06/01/2005

FOLEY AND LARDNER

SUITE 500

3000 K STREET NW

WASHINGTON, DC 20007

EXAMINER

PHUONG, DAI

ART UNIT

PAPER NUMBER

2685

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/612,949	KATO, HIDENORI	
	Examiner	Art Unit	
	Dai A Phuong	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01/30/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4 and 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Ton et al. (Pub. No: 2003/0117983).

Regarding claim 1, Ton et al. disclose a mobile communication system which includes a mobile unit, a radio base station, and a radio controller (fig. 1, [0006]), wherein the radio controller comprises: first and second user plane 212-217 processing means for performing processing to control transfer of user data in relation to the mobile unit (fig. 2, [0033]); and control plane processing means for processing to control transfer of signaling having a control signal, the control plane processing means being physically separated from the first and second user plane processing means and being provided in an upper position of the first and second user plane processing means ([0043]), and when detecting a congestion state of processing, the first user plane processing means transfers a part of the processing to the second user plane processing means ([0043]. Inherently, once the user plane 212, GTP-U, failed or was shutdown. Then, traffic builds up and causes congestion in the system).

Regarding claim 2, Ton et al. disclose all the limitation in claim 1. Further, Ton et al. disclose the mobile communication system wherein the first user plane processing means is an active system connected to the radio base station, and the second user plane 217 processing means is a backup system for the first user plane processing means ([0043]).

Regarding claim 3, Ton et al. disclose all the limitation in claim 1. Further, Ton et al. disclose the mobile communication, wherein the first user plane processing means comprises means for, in response to the detection of the congestion state ([0041]), controlling so as to switch a transmission/reception destination of the control signal and the user data to the second user plane processing means as well as transmitting a switching direction to the second user plane processing means ([0043]), and means for notifying the second user plane processing means of information necessary for processing transferred to the second user plane processing means ([0043]).

Regarding claim 4, Ton et al. disclose all the limitation in claim 3. Further, Ton et al. disclose the mobile communication system wherein the second user plane processing means comprises means for inheriting the information in response to the notice of the information as well as processing the control signal and the user data in response to reception of the switching direction ([0043]).

Regarding claim 8, Ton et al. disclose an operation control method in a mobile communication system which includes first and second user plane processing means for performing processing to control transfer of user data in relation to a mobile unit and control plane processing means for performing processing to control transfer of signaling having a

control signal, the control plane processing means being physically separated from the first and second user plane processing means and being provided in an upper position of the first and second user plane processing means ([0043]), wherein the first user plane processing means executes a step of, when a congestion state of processing is detected, transferring a part of the processing to the second user plane processing means ([0041] and [0043]).

Regarding claim 9, Ton et al. disclose all the limitation in claim 8. Further, Ton et al. disclose the operation control method wherein the first user plane processing means is an active system connected to a radio base station for providing a radio bearer to the mobile unit, and the second user plane processing means is a backup system for the first user plane processing means ([0033]).

Regarding claim 10, Ton et al. disclose all the limitation in claim 8. Further, Ton et al. disclose the operation control method wherein the first user plane processing means further executes ([0041]): a step of, in response to the detection of the congestion state, controlling so as to switch a transmission/reception destination of the control signal and the user data to the second user plane processing means ([0043]); a step of transmitting a switching direction to the second user plane processing means; and a step of notifying the second user plane processing means of information necessary for processing transferred to the second user plane processing means ([0043]).

Regarding claim 11, Ton et al. disclose all the limitation in claim 10. Further, Ton et al. disclose the operation control method wherein the second user plane controlling means executes: a step of inheriting the information in response to the notice of the information ([003]); and a

step of processing the control signal and the user data in response to reception of the switching direction ([0043]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-6 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ton et al. (Pub. No: 2003/0117983) in view of Chitrapu et al. (Pub. No: 2003/0185190)

Regarding claim 5, Ton et al. disclose all the limitation in claim 1. But, Ton et al. do not disclose the mobile communication system wherein the radio base station is present in a first communication network, and the first and second user plane processing means and the control plane processing means are connected to a second communication network different from the first communication network, and the first user plane processing means further comprises conversion interface means between the first and second communication networks.

In the same field of endeavor, Chitrapu et al. disclose the mobile communication system wherein the radio base station is present in a first communication network ([0038]), and the first and second user plane processing means and the control plane processing means are connected to a second communication network different from the first communication network ([0080]), and the first user plane processing means further comprises conversion interface means between the first and second communication networks. ([0080])

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the user equipment of Ton et al. by specifically including the radio base station is present in a first communication network, and the first and second user plane processing means and the control plane processing means are connected to a second communication network different from the first communication network, and the first user plane processing means further comprises conversion interface means between the first and second communication networks, as taught by Chitrapu et al., the motivation being in order to provide wireless telecommunication services to users through user equipment.

Regarding claim 6, the combination of Ton et al. and Chitrapu et al. disclose all the limitation in claim 5. Further, Ton et al. disclose the mobile communication system wherein the second user plane processing means transmits and receives the control signal and the user data via the conversion interface means in the first user plane processing means ([0043]).

Regarding claim 12, Ton et al. disclose all the limitation in claim 1. But, Ton et al. do not disclose the operation control method wherein the radio base station is present in a first communication network, and the first and second user plane processing means and the control plane processing means are connected to a second communication network different from the first communication network, and the first user plane processing means further executes a step of performing interface conversion between the first and second communication networks.

In the same field of endeavor, Chitrapu et al. disclose the operation control method wherein the radio base station is present in a first communication network ([0038]), and the first and second user plane processing means and the control plane processing means are connected to

a second communication network different from the first communication network ([0080]), and the first user plane processing means further executes a step of performing interface conversion between the first and second communication networks ([0080]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the user equipment of Ton et al. by specifically including the radio base station is present in a first communication network, and the first and second user plane processing means and the control plane processing means are connected to a second communication network different from the first communication network, and the first user plane processing means further executes a step of performing interface conversion between the first and second communication networks, as taught by Chitrapu et al., the motivation being in order to provide wireless telecommunication services to users through user equipment.

Regarding claim 13, the combination of Ton et al. and Chitrapu et al. disclose all the limitation in claim 12. Further, Ton et al. disclose the operation control method wherein the second user plane processing means transmits and receives the control signal and the user data via the step of performing the interface conversion in the first user plane processing means ([0043]).

5. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ton et al. (Pub. No: 2003/0117983) in view of Chitrapu et al. (Pub. No: 2003/0185190) and Further in view of Lehtimaki et al. (Pub. No: 2002/0085512)

Regarding claim 7, the combination of Ton et al. and Chitrapu et al. disclose all the limitation in claim 5. But, the combination of Ton et al. and Chitrapu et al. do not disclose the

mobile communication system wherein the first communication network includes an ATM communication network, and the second communication network includes an IP communication network.

In the same field of endeavor, Lehtimaki et al. disclose the mobile communication system wherein the first communication network includes an ATM communication network, and the second communication network includes an IP communication network ([0034]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the user equipment of the combination of Ton et al. and Chitrapu et al. by specifically including the first communication network includes an ATM communication network, and the second communication network includes an IP communication network, as taught by Lehtimaki et al., the motivation being in order to route user data via an access network to a gateway device of a core network.

Regarding claim 14, this claim is rejected for the same reasons as set forth in claim 7.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hopener et al. (U.S. 5228076) high speed encoding for telecommunication system

Eun (U.S. 6119015) synchronizing synchronous information for each base station

Rinne et al. (Pub. No: 2003019915) controlling radio communications network

Valent et al. (Pub. No: 20050083876) connection reconfiguration in cellular network

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Shin (Pub. No: 20040043771) controlling radio access bearer in system

Duplessis et al. (Pub. No: 20030104816) dual band unidirectional in cellular system

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dai A Phuong whose telephone number is 703-605-4373. The examiner can normally be reached on Monday to Friday, 9:00 A.M. to 5:00 P.M..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dai Phuong

AU: 2685

Date: 05-12-2005



W. R. YOUNG
PRIMARY EXAMINER